

CLAIMS

1. A honeycomb filter for purifying exhaust gases which has a structure in which:

5 a columnar body made of porous ceramic comprises a number of through holes, said through holes being placed in parallel with one another in the length direction with wall portion interposed therebetween;

10 predetermined through holes of said through holes are filled with plugs at one end of said columnar body, while the through holes that have not been filled with said plugs at said one end are filled with plugs at the other end of said columnar body; and

15 a part or all of said wall portion functions as a filter for collecting particulates

wherein

20 a bending strength $F\alpha$ (MPa) of said honeycomb filter for purifying exhaust gases and a length L (mm) of said plug in the length direction of the through hole satisfy the relationship of $F\alpha \times L \geq 30$.

2. The honeycomb filter for purifying exhaust gases according to claim 1,

wherein

25 the bending strength $F\alpha$ (MPa) of the honeycomb filter for purifying exhaust gases and the length L (mm) of the plug in the length direction of said through hole satisfy the relationship of $F\alpha \times L \leq 200$.

30 3. The honeycomb filter for purifying exhaust gases according to claim 1 or 2,

wherein

a catalyst is attached thereon.

35 4. The honeycomb filter for purifying exhaust gases according

to any one of claims 1 to 3,

wherein

collected and accumulated fine particles are removed by
a back washing process using a gas flow.

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5. The honeycomb filter for purifying exhaust gases according
to any one of claims 1 to 3,

wherein

collected and accumulated fine particles are removed by
10 heating exhaust gases and allowing the heated gases to flow
therein.